

# Notice of Allowability

Application No.

10/780,437

Examiner

Jennifer A. Mehmood

Applicant(s)

LIAN ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments received on November 27, 2006.
2. ☒ The allowed claim(s) is/are 1-19, 24-33 and 37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Allowable Subject Matter***

1. Claims 1-19, 24-33, and 37 is allowed.

The following is an examiner's statement of reasons for allowance: For claim 1, a marker is disclosed, comprising: a first resonant circuit comprising a first planarized coil having a pair of terminals and a capacitor connected to said pair of terminals, said first resonant circuit to generate a first resonant signal in response to an interrogation signal; and a second resonant circuit comprising a second planarized coil having a pair of terminals and a non-linear capacitor connected to said pair of terminals, with a portion of said second planarized coil to overlap a portion of said first planarized coil, said second resonant circuit to receive said first resonant signal and generate a second resonant signal having a second resonant frequency; wherein the first planarized coil and the second planarized coil overlap partially. For claim 10, a first resonant circuit is disclosed, comprising: a first planarized coil having a pair of terminals and a capacitor connected to said pair of terminals, said first resonant circuit to generate a first resonant signal in response to an interrogation signal; and a second resonant circuit comprising a second planarized coil having a pair of terminals and a non-linear capacitor connected to said pair of terminals, with said second resonant circuit positioned within said first planarized coil, said second resonant circuit to receive said first resonant signal and generate a second resonant signal having a second resonant frequency. For claim 19, a system is disclosed, comprising: a transmitter to transmit an interrogation signal operating at a first frequency; a security tag having a frequency-dividing marker comprising a pair of overlapping resonant circuits, with a first resonant circuit to

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generate a first resonant signal in response to said interrogation signal, and a second resonant circuit to receive said first resonant signal and generate a second resonant signal having a second resonant frequency in response to said first resonant signal; a detector to detect said second resonant signal from said marker and generate a detection signal in accordance with said second resonant signal; wherein the first resonant circuit includes a first planarized coil having a first pair of terminals, and a capacitor coupled to said first pair of terminals; wherein the second resonant circuit includes a second planarized coil having a second pair of terminals, and a non-linear capacitor connected to said second pair of terminals; and wherein the second resonant circuit is positioned within the first planarized coil. For claim 29, a method is disclosed comprising, receiving an interrogation signal at a first resonant circuit for a marker, the first resonant circuit including a first planarized coil having a first pair of terminals; generating a first resonant signal having a first resonant frequency in response to the interrogation signal; receiving said first resonant signal at a second resonant circuit, the second resonant circuit including a second planarized coil having a second pair of terminals; and generating a second resonant signal having a second resonant frequency in response to said first resonant signal, with said second resonant frequency being different from said first resonant frequency; wherein the first resonant circuit includes a capacitor coupled to said first pair of terminals, and the second resonant circuit includes a non-linear capacitor coupled to said second pair of terminals; and wherein the second resonant circuit is positioned within the first planarized coil. For claim 37, a method is disclosed, comprising: receiving an interrogation signal at a first

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resonant circuit for a marker, the first resonant circuit including a first planarized coil having a first pair of terminals; generating a first resonant signal having a first resonant frequency in response to the interrogation signal; receiving said first resonant signal at a second resonant circuit, the second resonant circuit including a second planarized coil having a second pair of terminals; and generating a second resonant signal having a second resonant frequency in response to said first resonant signal, with said second resonant frequency being different from said first resonant frequency; wherein the first resonant circuit includes a capacitor coupled to said first pair of terminals, and the second resonant circuit includes a non-linear capacitor coupled to said second pair of terminals; and wherein the first planarized coil and the second planarized coil overlap partially. Moreover, the prior art indicates that this particular device, system, and method is novel and has not been published or patented by other entities.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

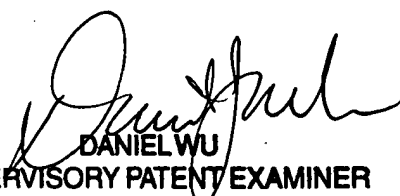
### ***Conclusion***

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Mehmood whose telephone number is (571) 272.2976. The examiner can normally be reached on M-F from 8:00am to 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Daniel Wu, can be reached at (571) 272.2964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer A. Mehmood  
December 6, 2006

  
DANIEL WU  
SUPERVISORY PATENT EXAMINER  
12/18/06